WHAT IS CLAIMED IS:

1. A control apparatus for automatically stopping and restarting an engine of a vehicle, which is equipped with the engine, a motor, a compressor driven by the engine and motor, an air conditioner employing a refrigerating cycle driven by the compressor and a motor control unit that controls the motor so as to drive the compressor at least while the engine is stopped, the apparatus comprising:

a first section for making a judgment on stopping the engine; and

a second section for making a judgment on restarting the engine,

wherein the apparatus provides the air conditioner with a plurality of operational modes selected by a user, and

wherein when the vehicle is not in motion with selection of a first mode, the first section permits the engine to stop if a first power that the motor can supply is greater than a second power of the compressor required by the air conditioner and the second section permits the engine to restart if the second power exceeds the first power.

2. The control apparatus according to claim1, wherein the second section permits the engine to restart if the remaining capacity of a battery that supplies electricity to the motor falls below a predetermined value.

3. The control apparatus according to claim1, wherein when the vehicle is not in motion with selection of a second mode, the first section permits the engine to stop regardless of the second power.

4. The control apparatus according to claim 3, wherein while the engine is

stopped, the motor control unit drives the compressor within the first power regardless of the second power.

5. The control apparatus according to claim 1, wherein the compressor comprises first and second compressors driven by the engine and motor, respectively.